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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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THOMAS, KAYDEN, HOSTEMEYER & RISLEY LLP
100 GALLERIA PARKWAY
SUITE 1750
ATLANTA, GA 30339

EXAMINER

RODRIGUEZ, PAUL L

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,569

Applicant(s)

CHAO ET AL.

Examiner

Paul L Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-16 and 33-38 is/are allowed.
- 6) ☒ Claim(s) 1,6,7,17-23 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 24-29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1-38 are presented for examination.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

Specification

3. The use of the trademark “i2” and “ADEXA” have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

4. Claims 24 and 27 are objected to because of the following informalities:

Claim 24 line 8 and claim 27 line 15 recites “...order base on...”, unclear if applicant intended to state “...based on...”

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-20, 23 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 17 recites the limitation "the current value of the cycle time" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. Previously "a current value of the control factor" and "the control factor comprises a cycle time" but there was no recitation of a current value of the cycle time.

8. Claim 17 recites the limitation "the target value of the cycle time" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 20 recites the limitation "the current value of the cycle time" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim. Previously "a current value of the control factor" and "the control factor comprises a cycle time" but there was no recitation of a current value of the cycle time.

10. Claim 20 recites the limitation "the adjusted cycle time" in line 5. There is insufficient antecedent basis for this limitation in the claim. Previously "to adjust the control factor but no

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adjustment of cycle time.

11. Claim 23 recites the limitation "the order" in line 6. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 32 recites the limitation "the order" in line 6. There is insufficient antecedent basis for this limitation in the claim.

13. The examiner has provided a number of examples of the claim deficiencies in the above, however, the list of deficiencies may not be all inclusive. Applicant should refer to these as examples of deficiencies and should make all the necessary corrections to eliminate the claim objections.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 7, 21, 22, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Edstrom et al (U.S. Pat 5,233,533). The claimed invention reads on Edstrom et al as follows:

Edstrom et al discloses (claim 1, 20, 30) a computer implemented system for (figure 1a), method of (col. 1 lines 63-68) and a storage medium for storing a computer program for (abstract, software), control factor management for a work-in-process (WIP) in a production

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system (col. 2 lines 5-66) comprising a plan engine to generate a plan for an order for the WIP according to a control factor (col. 2 lines 5-31, “due date”) and a control factor management module to adjust the control factor of the plan engine according to a current value of the control factor in the production system (col. 2 lines 31-43), a target value of the control factor (col. 2 lines 5-31, target due date, col. 10 lines 60 – col. 11 line 7), and a priority of the WIP (col. 10 lines 46-59, col. 12 line 1-9, claim 14), (claim 7, 22, 31) wherein the control factor comprises a cycle time for the WIP (col. 5 lines 60-66, col. 11 lines 30-49). Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

16. Claims 1, 6, 7, 21, 22, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin (U.S. Pat 6,434,443). The claimed invention reads on Lin as follows:

Lin discloses (claim 1, 20, 30) a computer implemented system for (figure 2, 3), method of (abstract) and a storage medium for storing a computer program for (program, figure 2, inherent), control factor management for a work-in-process (WIP) in a production system (col. 2 lines 17-20) comprising a plan engine to generate a plan for an order for the WIP (step 43) according to a control factor (col. 2 lines 26-29, “Due_Date”) and a control factor management module to adjust the control factor of the plan engine according to a current value of the control factor in the production system (col. 2 lines 29-32), a target value of the control factor (col. 2 lines 29-35, deliverable cycle time), and a priority of the WIP (col. 2 lines 19-24), (claim 6) wherein the WIP comprises wafers for processing and the production system is an IC foundry (abstract, fabrication plant, col. 1 lines 7-10), (claim 7, 22, 31) wherein the control factor

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comprises a cycle time for the WIP (col. 2 lines 21-39). Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Allowable Subject Matter

17. Claims 8-16 and 33-38 are allowed.

18. Claims 24-29 are allowed. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

19. Claims 23 and 32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter:

While Edstrom et al and Lin discloses a computer implemented system, method and storage medium for control factor management for a work-in-process (WIP) in a production system, comprising a plan engine to generate a plan for an order for the WIP according to a

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control factor and a control factor management module to adjust the control factor of the plan engine according to a current value of the control factor in the production system, a target value of the control factor, and a priority of the WIP and Lin also discloses a WIP distribution matrix, neither of these reference taken either alone or in combination with the prior art of record disclose a computer implemented system, method and storage medium for control factor management in a production system, specifically including:

(claim 2) “the control factor management module comprises a control factor matrix for the WIP, the control factor matrix being a function of the current value of the control factor in the production system, the target value of the control factor, the priority of the WIP, and a target date of the order”,

(claim 8, 15) “a capacity model, a plan engine to reserve a capacity for the order based on the capacity model, and generate a plan for a work-in-process (WIP) of the order according to a control factor; and a control factor management module to adjust the control factor of the plan engine according to a current value of the control factor in the production system, a target value of the control factor, and a priority of the WIP”,

(claim 23, 32) “wherein the control factor is adjusted with a control factor matrix as a function of the current value of the control factor in the production system, the target value of the control factor, the priority of the WIP, and a target date of the order”,

(claim 24) “providing a capacity model, determining a control factor for the product, generating a plan for the order base on the capacity model according to the control factor, adjusting the control factor according to the current value of the control factor, the target value of the control factor, and a priority of the WIP”,

(claim 27) “providing a capacity model, providing a control factor for the IC product, adjusting the control factor according to the current value of the control factor, the target value of the control factor, and a priority of the WIP, and generating a plan for the WIP of the order base on the capacity model according to the control factor”, and

(claim 33, 36) “determining a control factor for the product, reserving a capacity and generating a plan for the order according to the control factor, adjusting the control factor according to the current value of the control factor, the target value of the control factor and a priority of the WIP”,

in combination with the remaining elements and features of the claimed invention.

It is for these reasons that the applicant's invention defines over the prior art of record.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Flockhart et al (U.S. Pat 6,463,346) – teaches a scheduling optimization system that constantly reevaluates a completion time, using a target completion time.

Chacon (U.S. Pat 6,128,588) – teaches a scheduling engine using cycle time to schedule WIP in an IC foundry.

Tai et al (U.S. Pat 5,546,326) – teaches a scheduler that evaluates based on due dates and priority.

Inada (U.S. Pat 5,523,952) – teaches a production system that schedules using standard working times and target working times.

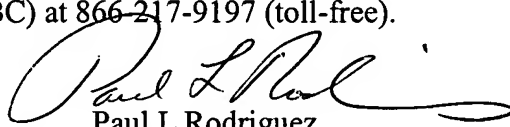
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Howie et al (U.S. Pat 5,093,794) – teaches a job scheduler that utilizes priorities, start times and target start times to adjust schedules.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul L Rodriguez whose telephone number is (571) 272-3753. The examiner can normally be reached on 6:00 - 4:30 T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Paul L Rodriguez
Primary Examiner
Art Unit 2125

PLR
4/8/05